

### **REMARKS**

Applicants have filed this Response to Office Action in response to the Final Office Action dated May 21, 2009, the Advisory Action dated August 27, 2009, and the Interview Summary dated November 2, 2009. Claims 1-2, 4-12, 14-22 and 27-28 are pending for prosecution. Claims 1, 14, and 28 are independent. Claims 1-2, 4-12, 14-16, 18, and 27-28 have been amended. Applicant respectfully requests the withdrawal of all outstanding rejections and objections and the allowance of all pending claims.

#### **I. Claim Rejections - U.S.C. § 101**

Claims 1-2, 4-12, 14-16 and 27-28 were rejected under 35 U.S.C. § 101. The Examiner cites *Bilski* against the present application asserting that the invention seems to be software per se without having any hardware device to perform the claimed functions. Per the Examiner's Interview Summary, this rejection will be withdrawn if the Applicant appeals the instant application. The same amendments are made in this Preliminary Amendment. Therefore, the Applicant respectfully requests that these amendments be entered.

#### **II. Claim Rejections – U.S.C. § 112**

Claims 1-2 and 4-12 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 1 is independent. Claims 2 and 4-12 depend from independent Claim 1. The Examiner asserts that "said ensemble of algorithms" and "the output of said ensemble of algorithms" is indefinite subject matter. The Applicant has removed the terminology relating to an "ensemble of algorithms" per the Examiner's suggestion in the Interview Summary. Therefore, Applicant respectfully requests withdraw of this rejection.

Additionally, it is requested that the rejection to Claims 2, and 4-13 are withdrawn as these claims depend from Claim 1 are fully described and supported by the specification.

Additionally, Claim 9 was also rejected. According to page 6 of the Office Action “[a]s to Claim 9, what does it mean by ‘said relationship link is positioned in a list in direct proportion to the degree of consensus among said ensemble of algorithms (i.e., what is the metes and bounds of the claimed ‘a list’ and ‘ensemble of algorithms’? which unit measures the degree of consensus among said ensemble of algorithms and how to do it?)” The specification of the instant application fully supports and makes definite all recited claim terms and shape. Paragraphs 0049 and 0050, as well as in various other places in the specification supports that relationship links are “positioned in a list.” Paragraphs 0049 and 0050 illustrate and explain Table 1 which is a type of list of records. Thus, for at least the aforementioned reasons Applicant respectfully requests reconsideration and withdrawal of these rejections under 35 U.S.C. § 112 second paragraph of Claim 9.

### **III. Claim Rejections - 35 U.S.C. § 103 - Rejection of Claims 1-2, 4-12, 14-22 and 27-28**

Claims 1-2, 4-12, 14-22 and 27-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horvitz et al (U.S. Pat. No. 6,182,133) in view of Wical (U.S. Pat. No. 5,904,821). The Applicant has amended independent claims 1, 14, and 28 in order to include the language suggested by the Examiner in the Interview Summary. The Applicant has previously addressed many of the issues cited by the Examiner and incorporates those arguments herein. Therefore, Applicant respectfully requests reconsideration and withdrawal of this rejection.

The Examiner claims that the Applicant has not specifically stated what the novelty of the present invention is; however, in the Applicant's Response to Office Action dated 3/5/2009 and the declaration filed with the Response to Office Action, the Applicant clearly points to several

novel features of the present application. For instance, the present application builds relationships between informational items or documents not exclusively based on any user behaviors (as with Horvitz), but based on similarities between the informational items or documents (such as textual similarities). The method claimed in the present application is for analyzing informational item relationships based upon an approach that uses at least one algorithm or uses multiple distinct algorithms which each supply a suggestion for the result and an arbiter algorithm that chooses the final result from amongst the suite of algorithms. As claimed in Claim 1 of the present application, "the combination of one or more algorithms working in conjunction" produces an output simulating a non-conventional Bayesian-type Belief Network. The system then augments the user behavior similarities (integer-value weight) with the document similarities (integer-weight relationship link) to produce a combined similarity value (the output). The "combination of at least one of said algorithms" is applied "to the first and second informational items relative to said inter-value weight of said relationship link" which will produce an output. That output is then stored. The algorithms process the given values without needing to consider any existing explicit relationships between the informational items. Contrary to Horvitz, this approach allows the inclusion of relationships that go beyond usage relationships when there has been no usage data available for a given set of informational items. By identifying a first and second informational item and then "dynamically updating at least one relationship field defining similarities of respective characteristic between said first informational item and said second informational item in an information retrieval session, wherein said fields are used for representing a data item classification process comprising the combination of one or more algorithms working in conjunction to produce an output simulating a non-conventional Bayesian-type Belief Network" a previous relationship does not need to exist.

The present claimed invention, unlike the prior art, uses combinations of at least one or more algorithms to determine relationships between informational items.

Neither Horvitz nor Wical independently or in combination provide the full system of the present claimed invention, nor do they envisage the present application, nor do they describe the algorithmic methodology. With these missing elements, the combination of Horvitz and Wical, while not obvious to combine in the first place, also misses key elements of the present claimed application. It is the considered opinion of the Applicant that the examiner used a hindsight construction to combine Horvitz and Wical, and did so in a piecemeal fashion that overlooked the explicitly stated approaches of Horvitz. As a clarifying visual aid, the Applicant submitted the summary drawings of the Horvitz and Wical systems by way of declaration to more clearly illuminate the distinctions. The Examiner has rejected these expert summaries, even though the declaration was by an expert in the field of computer science, asserting that "one can't be the expert of the prior art issued to Horvitz et al & Wical, unless she/he is one of the owners/inventors of the prior art." According to MPEP § 716.01 evidence traversing rejections "must be considered by the examiner whenever present." There is nothing in the rules that says that because the declaration submitted was not by the inventor of the prior art that it should not be considered. In the expert's declaration, he states that "these references do not render the claimed invention obvious." Therefore, an expert in the field has determined that the combination of Horvitz and Wical is nonobvious to a person of ordinary skill in the art.

Further, the Horvitz invention creates a system for pre-fetching pages in a browser session, with the likely intent of providing a perceived faster browser response rate. See Horvitz Abstract. The Horvitz system does this pre-fetching based upon a single algorithm based upon the explicit blending of one or more of the following: web log usage statistics, expert

expectations of user behavior, or individual user behavior models. In spite of the Examiner's protestations, Horvitz does not describe the use of an ensemble of algorithms nor does it describe a combination of one or more algorithms, a technique with a specific meaning in the art. An ensemble of algorithms is a group of algorithms that work together as a committee to solve a problem. Hence, Horvitz describes a system of predicting page transitions between documents explicitly linked to the present page a user is viewing rather than, as in the claimed invention, using a combination of one or more algorithms to produce integer-weight relationship links or a final value that incorporates both the integer-weight relationship link and an integer-weight based on historical frequencies. The use of a combination of one or more algorithms is not present in the prior art.

The Wical invention is nothing more than an advanced search engine which matches user search terms against the contents of documents. This type of search engine matching does not implore the use of the combination of one or more algorithms to score relationship links, historical frequencies of those links, or produce a usage value for searching such items. The Examiner combines Horvitz and Wical only to gain the weighting scheme described in Wical and these schemes are completely distinctly from the claimed integer-value weighting scheme of the claimed invention. Wical uses weighting in response to an explicit user search query, whereas the present invention uses algorithms to produce weighting that builds document relationships in the absence of any user behavior or query.

Applicant therefore respectfully submits that neither Horvitz nor Wical or any legitimate combination thereof teach or suggest all of the limitations of Claims 1-2, 4-12, 14-22 and 27-28.


#### **IV. Conclusion**

If any issue regarding the allowability of any of the pending claims in the present application could be readily resolved, or if other action could be taken to further advance this

application such as an Examiner's amendment, or if the Examiner should have any questions regarding the present amendment, it is respectfully requested that the Examiner please telephone Applicant's undersigned attorney in this regard. Should any fees be necessitated by this response, the Commissioner is hereby authorized to deduct such fees from Deposit Account No. 11-0160.

Respectfully submitted,

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